

“MOSSY” FOOT OF THE AMAZON REGION, AN INFECTIVE VERRUCOTIC CONDITION AFFECTING THE SKIN OF THE UPPER AND LOWER LIMBS

BY

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(Plates VII, VIII, IX)

My attention was attracted to a verrucoid condition usually affecting the lower limbs of natives of the Amazon region. It appears to be auto-infective, and nearly all the cases exhibited one or more infective foci. Many patients complain of the exquisite tenderness of the papillomata, and on account of the vascularity even slight injuries may cause pain and bleeding. The condition is of slow growth. It is probable that the pain and bleeding are the chief reasons which induce the patient to ask for treatment.

The photographs* (Plates VII, VIII) depict a severe type of the infection. The patient, a man aet. 23, an Amazonense of the peasant class, claimed that he had injured his right foot about nineteen months previously. The foot remained tender and swollen. He does not remember having had any fever other than sezões (ague), and about a year later he noticed small vesicles appearing on the foot, on the outside of the heel. The vesicles were moist and persisted for a couple of weeks, when they gave place to small dry, warty growths, which gradually advanced and spread to the toes, around the heel and

* I am indebted to Messrs. G. Huebner and Amaral, of Manaus, for the photographs of the case.

the inside of the foot. The condition had persisted for seven months before the photographs were taken.

The whole of the right leg from below the knee is swollen and hard, pitting on strong pressure; the skin is tense, smooth, and glossy, and through the hair the superficial lymphatics and small vessels can be seen. Below the knee, on the outside, is a small, hard fibrous nodule the size of a large pea. The foot is greatly enlarged and a deep sulcus is formed by a fold at the back of the ankle joint. Along the lower part of the foot is a verrucoid growth, which covers the dorsal surface of the toes and part of the foot, and is well raised above the surface of the skin. The growth extends around the foot but does not involve the sole. The growth is more advanced along the outside than along the inside of the foot, and extends higher up. The appearance is as if the foot was covered with old dried moss.

On the dorsal surface of the toes the growth appears as small, well-defined, but closely collected papillae, resembling a miniature forest of coarse points; these spring from a bed of thickened tissue, well raised above the surface of the skin. The growth covers the whole of the dorsal surface of the toes, extends and overhangs or surrounds the toe nails, but does not completely envelop them. The skin between the toes is free from all growth. The growth extends slightly further on to the second and third and little toes, but does not invade the plantar surface. The big toe has some old scars, where the growths have been burnt with caustic.

The forest-like growth of warts extends towards the back of the foot for nearly 8 cm., and continues in a wavy outline across the foot. On the outside of the foot the ridge of the growth is more irregular, varying from 4 to 7 cm., and, at the back of the heel, from 3 to 4 cm. deep. It does not cover the deep sulcus at the back of the os calcis. On the inside surface of the foot the outline is still more irregular, being from 2.5 to 6 cm. wide.

The character of this growth alters on the sides and heel; instead of appearing moss-like, the hypertrophied patches of papillae form elevated plaques, with a thick and horny or sodden epidermis. The individual points of the papillae are ill defined, and the plaques are intersected by deep cracks or fissures. On the inside of the foot the growth appears as warty, rounded, nodular masses, which project 4 to 11 mm. above the skin. Over the front of the foot are one or two

small scars of a keloid character. The papillomatous growth over the toes varies from 3 to 9 mm. in thickness.

The shading of the growth is most striking. It resembles, both in appearance and colour, the old dry moss found growing on rocks which are exposed to very little moisture, the colour varying from yellow to slate grey.

On the left leg (Plate VIII, fig. 1) are two patches, measuring 1·3 by 1·7 cm. and 1·8 by 2·7 cm. They are indurated, warty growths which are beginning to ulcerate. On the lower third of the leg a large ulcer, 4·3 by 4·0 cm. is seen. The induration of the sides is extensive, and the centre of the ulcer is slightly excavated. All three ulcers are covered with a thin watery discharge, containing pus cells, granular debris, numerous staphylococcus aureus and citreus, also many bacilli of varying sizes, negative and positive to Gram.

The patient states that these three ulcers had originated as small nodular growths, resembling the one on the right leg just below the knee, and that traumatism caused these nodules to swell. Then little vesicles appeared and an ulcer resulted. He believes that the nodules appeared some three months before his visit to the hospital.

Some of the verrucoid growths over the toes were burnt with the thermo-cautery before being excised. A small portion, with aseptic precautions, was inserted under the skin of the nose of a rabbit. The incision was closed with collodion. The wound healed, and six weeks later a small vesicular eruption appeared. The vesicles burst and clear watery fluid exuded. From the middle of the cluster, minute hard nodules developed. The tissue around the base of the nodules gradually became more infiltrated. Ten days later the nodules commenced to resemble minute warts, which were evidently itchy, as the rabbit was continually scratching the spot and causing them to bleed. The papillae became encrusted with dried exudate, the patch measuring 1·3 by 2·0 cm. above the surface of the skin. The hind paws became infected from the scratching, and finally a moist warty condition was noted on the ears.

Microscopically the growth on the rabbit's nose resembles the verrucoid growth on the right foot and the ulcerated nodules on the left leg. The condition appears to be an infective keratosis. Owing to ocular troubles I have been unable to include the histological study of the tissues, and must defer the completion of this report.

Verrucoid growths are common in elephantiasis, but I have not found any reference to experimental transmission of the growths.

I do not report the condition as a case of elephantiasis, complicated by keratosis. Only two of my patients have had definite enlargement of the limb. Some of the cases had warty growths on both lower limbs. I was shown a case in Pará where the growths involved the right foot and leg as far as the mid-thigh, and the left knee was covered with large patches of warty growths, some of which exhibited extensive ulceration. Dr. Stephens has allowed me to reproduce a photograph which was sent by Dr. J. H. H. Harrison, of Belize, British Honduras (Plate IX, figs. 1, 2). The appearance of the growths is the same as in my cases.



PLATE VII.

Front view of right foot showing verrucoid condition. Note the small nodule on the front of the leg below the knee.





PLATE IX.

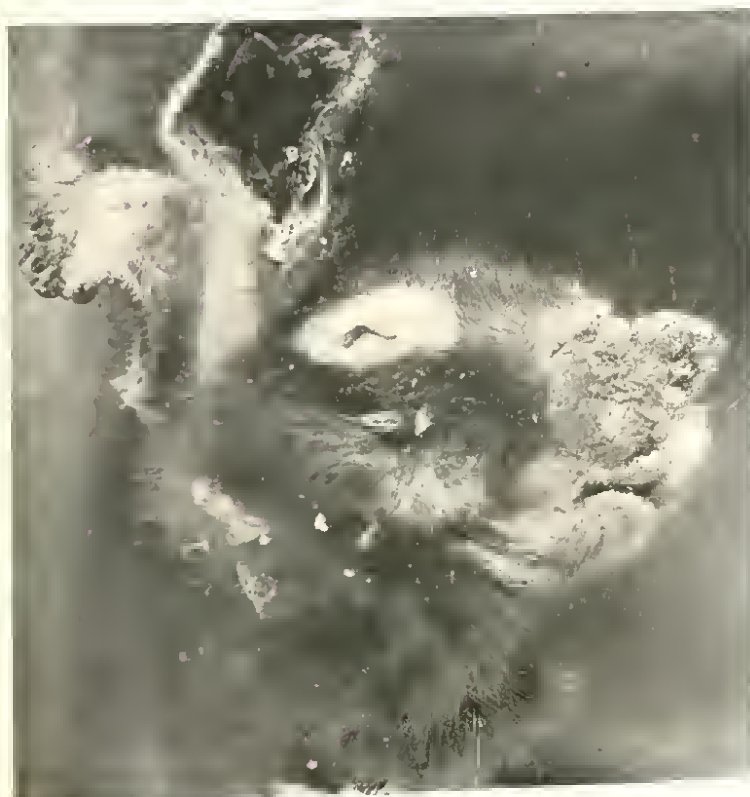
- Fig. 1. Dr. J. H. H. Harrison's case. Left leg, side view, showing the same warty growths on the dorsum and sides of the foot and leg.
- Fig. 2. Front view of same case.
- Fig. 3. Rabbit inoculated with some of the deeper tissue of the growths. Note the nodular mass on the nose.



No. 1.



No. 2.



No. 3.